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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/631,123

07/31/2003

Christopher Ware

CML00995AC

2473

7590

09/20/2005

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EXAMINER

DAVIS, CYNTHIA L

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                             |  |
|------------------------------|-------------------------------|-----------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/631,123 | Applicant(s)<br>WARE ET AL. |  |
|                              | Examiner<br>Cynthia L. Davis  | Art Unit<br>2665            |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/29/2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 8-12, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 8, 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 2-3 and 9-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, filed 8/29/2005, with respect to claims 2, 3, 9, 10, 15, and 16, have been fully considered and are persuasive. The rejections of the claims have been withdrawn.
2. Applicant's arguments regarding claims 1 and 8, filed 8/29/2005, have been fully considered but they are not persuasive. The claims language recites a deferral window; the latency period in Lee, during which stations which had nothing to transmit at the outset are not allowed to transfer, is a deferral window; during that time, if a previously inactive station gets data that it needs to transmit, the station must defer the transmission until the latency period is over. Further, Kumar discloses calculating the length of such a deferral window. The cited references read on the claim language.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 4-5, 8, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Kumar.

Regarding claim 1, transmitting a first poll from said base station to a first user terminal traffic stream in an active list of the user terminal traffic streams is not specifically disclosed in Lee; however, Lee does disclose in column 3, lines 48-50, polling all individual stations in the system and then assigning them to the active or

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inactive list, whereas claim 1 puts all the individual stations in the system on the active list, polls them, and then removes the inactive ones from the active list, which is, in effect, the same thing. Transmitting at least one frame from a group of data frames from said first user terminal traffic stream to said base station in response to said first poll, wherein a queue state of said first user terminal traffic stream is indicated in said frame is not specifically disclosed in Lee; however, Lee does disclose that the base station learns of the queue state of each user terminal in column 3, lines 50-52. It would have been obvious to one skilled in the art at the time of the invention to transmit the queue state of the user stations in the header of the first frame. The motivation would be to send the queue state first, so that scheduling can be done before any other information is sent. Removing said first user terminal traffic stream from said active list when said first frame indicates that said queue state is empty is disclosed in column 3, lines 50-52. Scheduling transmissions of data frames between said base station and said plurality of user terminal traffic streams that remain on said active list is disclosed in column 3, lines 52-61. Returning said first user terminal traffic stream to said active list at the expiration of said deferral window is disclosed in Lee, column 3, lines 48-68 (the process is repeated once the deferral window expires, all the stations are returned to the active list at the end). Calculating a deferral window for said first user terminal traffic stream is missing from Lee. However, Lee does disclose in column 3, lines 53-54, a latency period, which is a design parameter, not a calculated parameter. Kumar discloses calculating this period in figure 8, element 801. It would have been obvious to one skilled in the art at the time of the invention to calculate the deferral window instead of

setting it as a design parameter as is done in Lee. The motivation would be to make the system more responsive to changes in traffic flow.

Regarding claim 8, a plurality of user terminal traffic streams in an active list is disclosed in Lee, figure 1, elements 12 and column 3, line 51. A base station is disclosed in Lee, figure 1, elements 11 and 13. The base station transmitting a first poll from said base station to a first user terminal traffic stream is disclosed in Lee, column 3, lines 48-50. Receiving at least one frame from a group of data frames from said first user terminal traffic stream to said base station in response to said first poll, wherein a queue state of said first user terminal traffic stream is indicated in said frame is not specifically disclosed in Lee, however, Lee does disclose that the base station learns of the queue state of each user terminal in column 3, lines 50-52. It would have been obvious to one skilled in the art at the time of the invention to transmit the queue state of the user stations in the header of the first frame. The motivation would be to send the queue state first, so that scheduling can be done before any other information is sent. Removing said first user terminal traffic stream from the active list when said first frame indicates that said queue state is empty is disclosed in column 3, lines 50-52. Scheduling transmissions of data frames between said base station and said plurality of user terminal traffic streams that remain on said active list is disclosed in column 3, lines 52-61. Returning said first user terminal traffic stream to said active list at the expiration of said deferral window is disclosed in Lee, column 3, lines 48-68 (the process is repeated once the deferral window expires, all the stations are returned to the active list at the end). Calculating a deferral window for said first user terminal traffic stream is

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missing from Lee. However, Lee does disclose in column 3, lines 53-54, a latency period, which is a design parameter, not a calculated parameter. Kumar discloses calculating this period in figure 8, element 801. It would have been obvious to one skilled in the art at the time of the invention to calculate the deferral window instead of setting it as a design parameter as is done in Lee. The motivation would be to make the system more responsive to changes in traffic flow.

Regarding claims 4 and 11, the deferral window being calculated based on a defined inter-arrival period of a user terminal traffic stream is missing from Lee. However, Kumar discloses in column 5, line 60 (equation 1) calculating the polling interval based on the service rate. It would have been obvious to one skilled in the art at the time of the invention to base the deferral window on these parameters. The motivation would be to have the deferral window relate to the traffic flow in the system.

Regarding claims 5 and 12, the inter-arrival period corresponds to a period between voice or video data frames generated by a codec is missing from Lee. However, Kumar discloses in column 11, lines 5-20, scheduling for voice. It would have been obvious to one skilled in the art at the time of the invention to schedule for voice. The motivation would be to be able to use the system for voice transmissions.

***Allowable Subject Matter***

4. Claims 15 and 16 allowed.
5. Claims 2, 3, 9, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L. Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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